PATENT COOPERATION TREATY

PCT

TRANSLATION INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

| Applicant's or agent's file reference WT 12/03 | | FOR FURTHER ACTION | N | See Form PCT/IPEA/416 | |
|---|---|---|---------------------|---|--|
| International application No. | | International filing date (day) | /month/year) | Priority date (day/month/year) | |
| PCT/EP2004/010572 | | 21.09.2004 | | 23.09.2003 | |
| International Patent (| Classification (IPC) or nation | onal classification and IPC | | | |
| | F28F27/02, F01M11/03 | | | | |
| Applicant HENGST GMBH & CO. KG | | | | | |
| | 1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36. | | | | |
| 2. This REPO | RT consists of a total of | 7 | _ sheets, including | this cover sheet. | |
| 3. This report | is also accompanied by Al | NNEXES, comprising: | | | |
| а. 🔀 | (sent to the applicant and | to the International Bureau) a | total of 4 | sheets, as follows: | |
| | sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). | | | | |
| | sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental | | | | |
| | Box. | | | | |
| b | (sent to the International I | Bureau only) a total of (indicat | te type and number | of electronic carrier(s)) | |
| _ | 1 . 1 . 1 | 111.6 | | , containing a sequence listing and/or tables | |
| related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions). | | | | | |
| 4. This report | contains indications relation | ng to the following items: | | | |
| Воз | x No. I Basis of the | report | | | |
| Воз | x No. II Priority | | | | |
| Воз | x No. III Non-establis | shment of opinion with regard | to novelty, inventi | ve step and industrial applicability | |
| Воз | x No. IV Lack of unit | y of invention | | | |
| Bo: | A 110. 1 | atement under Article 35(2) w d explanations supporting such | | ty, inventive step or industrial applicability; | |
| Воз | x No. VI Certain docu | uments cited | | | |
| Box | x No. VII Certain defe | ects in the international applica | ation | | |
| Воз | x No. VIII Certain obse | ervations on the international a | application | | |
| Date of submission of the demand Date of completion of this report | | | s report | | |
| | | | | | |
| Name and mailing address of the IPEA/EP | | | rized officer | | |
| | | | | | |
| | | | | | |
| Facsimile No. | | | none No. | | |

International application No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

PCT/EP2004/010572

| Box | No. I | I Basis of the report | | |
|-----|-------------|---|-------------------------------------|--|
| 1. | | h regard to the language, this report is based on the internationated under this item. | onal application in the language in | which it was filed, unless otherwise |
| | | This report is based on translations from the original language which is the language of a translation furnished for the purport international search (Rule 12.3 and 23.1(b)) publication of the international application (Rule 12.4 international preliminary examination (Rule 55.2 and | poses of: | , |
| 2. | rece | h regard to the elements of the international application, this eiving Office in response to an invitation under Article 14 a report): the international application as originally filed/furnished the description: | s report is based on (replacement s | |
| | | pages 1-17 pages* | | as originally filed/furnished |
| | | pages* | | |
| | \boxtimes | the claims: | | |
| | | nos | | as originally filed/furnished |
| | | nos.* | as amended (togethe | r with any statement) under Article 19 |
| | | nos.* _ 1-15 | _ received by this Authority on | 20.07.2005 with letter of 20.07.2005 |
| | | nos.* | received by this Authority on | |
| | \boxtimes | the drawings: | | |
| | | sheets _ 1/5-5/5 | | as originally filed/furnished |
| | | sheets* | received by this Authority on | |
| | | sheets* | received by this Authority on | |
| | | a sequence listing and/or any related table(s) – see Supplen | nental Box Relating to Sequence L | isting. |
| 3. | | The amendments have resulted in the cancellation of: | | |
| | | the description, pages | | |
| | | the claims, nos. | | |
| | | 41 - 4 | | |
| | | the sequence listing (specify): | | |
| | | | | |
| 4. | \boxtimes | This report has been established as if (some of) the amenthey have been considered to go beyond the disclosure as f | dments annexed to this report and | listed below had not been made, since |
| | | the description, pages | | |
| | | the claims, nos. 1 | | |
| | | the drawings, sheets/figs | | |
| | | the sequence listing (specify): | | |
| | | any table(s) related to sequence listing (specify): | | |
| * | If ite | em 4 applies, some or all of those sheets may be marked "sup | perseded." | |

International application No.
PCT/EP2004/010572

| Box | Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | | | |
|-----|---|-----------------|------|-----|
| 1. | Statement | | | |
| | Novelty (N) | Claims | 1-15 | YES |
| | | Claims | | NO |
| | Inventive step (IS) | Claims | 1-15 | YES |
| | | Claims | | NO |
| | Industrial applicabili | ity (IA) Claims | 1-15 | YES |
| | | Claims | | NO |
| | | | | |

2. Citations and explanations (Rule 70.7)

Reference is made to the following document:

D1: DE 196 54 365 A1 (BEHR GMBH & CO, 70469 STUTTGART, DE) 25 June 1998 (1998-06-25)

- 1 INDEPENDENT CLAIM 1
- 1.1 Document D1 is considered the prior art closest to the subject matter of claim 1 and discloses (the references between parentheses refer to that document) an oil cooler (abstract) for an internal combustion engine, comprising a support part (16) which can be flanged onto an engine block of the internal combustion engine and supports the oil cooler, the oil cooler being provided with channels (11, 12; 17, 18) for guiding oil and water, one of the channels being an oil cooler bypass channel (17) which connects an oil inlet (9) of the oil cooler to an oil outlet (9') of the oil cooler.

The subject matter of claim 1 thus differs from that known from D1 in that at least the major part

| | 101/112004/010 |
|-----------|---|
| Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| | of the length of the oil cooler bypass channel |
| | (17) extends through an oil cooler base plate |
| | which seals the oil cooler on the support side and |
| | extends on the oil cooler side through the |
| | remaining part of the oil cooler. |
| | |
| | The subject matter of claim 1 is thus novel (PCT |
| | Article 33(2)). |
| | |

1.2 The solution to this problem as proposed in claim 1 of the present application involves an inventive step (PCT Article 33(3)) for the following reasons:

Document D1 discloses an oil cooler bypass channel, at least the major part of the length of which extends through an intermediate plate (14) sealingly arranged between the oil cooler and the support part (16).

The application addresses the problem of producing an oil cooler with few individual parts. The concept of integrating the oil cooler bypass channel in an oil cooler base plate reduces the number of oil cooler plates, since the intermediate plate is no longer needed.

In order to integrate the oil cooler bypass channel in an oil cooler base plate, research is necessary in order to determine the geometry of the bypass channel in the oil cooler base plate and in the support part and in order to guarantee

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| Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | | |
|--|--|--|
| | sealing with the support part. | |
| | | |
| | A person skilled in the art familiar with document | |
| | D1 would therefore not arrive at the subject | |
| | matter of the first claim without thereby being | |
| | inventive. | |
| | | |
| 2 | DEPENDENT CLAIMS | |
| | | |
| | Claims 2 to 13 are dependent on claim 1 and | |
| | therefore likewise meet the PCT requirements for | |
| | novelty and inventive step. | |
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| Box No. VII | Certain defects in the international application | | |
|-----------------|---|--|--|
| The following d | The following defects in the form or contents of the international application have been noted: | | |
| | | | |
| | Contrary to PCT Rule $5.1(a)$ (ii), the description | | |
| | does not cite document D1 or indicate the relevant | | |
| | prior art disclosed therein. | | |
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Supplemental Box

In case the space in any of the preceding boxes is not sufficient. Continuation of:

Box I

Basis of the report

The amendments submitted with the letter of 20 July 2005 introduce substantive matter which, contrary to PCT Article 34(2)(b), goes beyond the disclosure in the international application as filed. The amendments concern the base plate of the oil cooler. In the original application, the oil cooler is sealed by said plate on the support side. Nowhere in the original application is it stated that said plate forms part of the oil cooler. The drawings also depict a separate oil cooler base plate. The amended claim, however, mentions "...an oil cooler base plate which forms part of the oil cooler...". This also covers the fact of the oil cooler base plate and the oil cooler being made together from one part (e.g. by milling from a whole piece), which, as has already been mentioned, is not covered by the original application.